

Globally Harmonized System of Classification and Labelling of  
Chemicals (GHS)

## eConduct Aluminium 451500

Version 3.0

Revision Date 09.12.2019

Print Date 20.01.2022

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : eConduct Aluminium 451500  
Material number : 022222B20

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

This information is not available.

#### 1.3 Details of the supplier of the safety data sheet

Company : ECKART GmbH  
Guntersthal 4  
91235 Hartenstein  
Telephone : +499152770  
Telefax : +499152777008  
E-mail address : msds.eckart@altana.com  
Responsible/issuing person

#### 1.4 Emergency telephone number

**NCEC:**

(contract no.: ECKART29003-NCEC)

+44 1235 239671 (Middle East/Africa, call and response in your language)

+1 215 207 0061 (Americas, call and response in your language)

+65 3158 1074 (Asia-Pacific, call and response in your language)

### SECTION 2: Hazards identification

#### GHS Classification

: Short-term (acute) aquatic hazard, Category 1, H400  
Long-term (chronic) aquatic hazard, Category 1, H410

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**Information concerning particular hazards for human and environment:** : Please refer to our website for further important safety instructions for handling aluminium powder:  
[http://www.eckart.net/fileadmin/eckart/Service/GDA\\_Alupulver\\_Safety\\_engl.pdf](http://www.eckart.net/fileadmin/eckart/Service/GDA_Alupulver_Safety_engl.pdf)

**GHS-Labeling**

Symbol(s) :



Signal word : Warning

Hazard statements : H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
**Response:**  
P391 Collect spillage.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Hazardous components which must be listed on the label****Other hazards which do not result in classification**

Combustible Solids

**SECTION 3: Composition/information on ingredients**

Substance name : Versuch 83001295 VP70711/G

Substance No. :

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**Hazardous components**

Chemical name	CAS-No. EINECS-No.	Classification and labelling	Concentration[%]
silver	7440-22-4 231-131-3	Aquatic Acute;1;H400 Aquatic Chronic;1;H410	10 - 20
silver	7440-22-4 231-131-3	Aquatic Acute;1;H400 Aquatic Chronic;1;H410	10 - 20
silicon dioxide	7631-86-9 231-545-4	Acute Tox.;5;H303	1 - 10

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**

- General advice : Move the victim to fresh air.
- No hazards which require special first aid measures.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

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If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

This information is not available.

**4.3 Indication of any immediate medical attention and special treatment needed**

This information is not available.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Dry sand, Special powder against metal fire

Unsuitable extinguishing media : ABC powder, Carbon dioxide (CO<sub>2</sub>), Water, Foam

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : Contact with water liberates extremely flammable gas (hydrogen).

Do not allow run-off from fire fighting to enter drains or water courses.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in

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accordance with local regulations.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.  
Evacuate personnel to safe areas.  
Avoid dust formation.

**6.2 Environmental precautions**

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform  
respective authorities.

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Use mechanical handling equipment.  
Do not use a vacuum cleaner.

Do not flush with water.  
Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For personal protection see section 8.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid creating dust. Routine housekeeping should be  
instituted to ensure that dusts do not accumulate on surfaces.  
Keep away from heat and sources of ignition. Do not smoke.

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For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : During processing, dust may form explosive mixture in air. Take measures to prevent the build up of electrostatic charge. Earthing of containers and apparatuses is essential. Use explosion-proof equipment. When transferring from one container to another apply earthing measures and use conductive hose material.

Normal measures for preventive fire protection.

Hygiene measures : Wash hands before breaks and at the end of workday.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Reaction with water liberates extremely flammable gas (hydrogen) Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep container closed when not in use. Keep away from sources of ignition - No smoking.

Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Protect from humidity and water.

Advice on common storage : Do not store together with oxidizing and self-igniting products. Never allow product to get in contact with water during storage. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data : Keep in a dry place. No decomposition if stored and applied as directed.

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**7.3 Specific end use(s)**

This information is not available.

**SECTION 8: Exposure controls/personal protection**
**8.1 Control parameters**
**Germany:**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium powder (stabilised)	7429-90-5	AGW (Inhalable fraction)	10 mg/m <sup>3</sup>	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
Further information		Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
aluminium powder (stabilised)	7429-90-5	AGW (Alveolate fraction)	1,25 mg/m <sup>3</sup>	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
Further information		Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
silver	7440-22-4	TWA	0,1 mg/m <sup>3</sup>	2000-06-16	2000/39/EC
Further information		Indicative			
silver	7440-22-4	AGW (Inhalable fraction)	0,1 mg/m <sup>3</sup>	2006-01-01	DE TRGS 900
Peak-limit: excursion		8;(II)			

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factor (category)					
Further information		Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).European Union (The EU has established a limit value: deviations in value and peak limit are possible)			
silver	7440-22-4	TWA	0,01 mg/m3	2006-02-09	2006/15/EC
Further information		Indicative			
silicon dioxide	7631-86-9	AGW (Inhalable fraction)	4 mg/m3	2013-09-19	DE TRGS 900
Further information		Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).Colloidal amorphous silica, including pyrogenic silica and in wet processes manufactured silica (precipitated silica, silicagel).When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

**United States of America (USA):**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium powder (stabilised)	7429-90-5	TWA (total dust)	50 Million particles per cubic foot	2012-07-01	
aluminium powder (stabilised)	7429-90-5	TWA (Respirable)	5 mg/m3	2013-10-08	
aluminium powder (stabilised)	7429-90-5	TWA (total dust)	15 mg/m3	2012-07-01	
aluminium powder (stabilised)	7429-90-5	TWA (total)	10 mg/m3	2013-10-08	
aluminium powder (stabilised)	7429-90-5	TWA (respirable fraction)	5 mg/m3	2012-07-01	
aluminium	7429-90-5	TWA (respirable)	15 Million particles	2012-07-01	



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powder (stabilised)		fraction)	per cubic foot		
aluminium powder (stabilised)	7429-90-5	PEL (Total dust)	10 mg/m <sup>3</sup>	2014-11-26	
aluminium powder (stabilised)	7429-90-5	PEL (respirable dust fraction)	5 mg/m <sup>3</sup>	2014-11-26	
aluminium powder (stabilised)	7429-90-5	TWA (Respirable fraction)	1 mg/m <sup>3</sup>	2008-01-01	
aluminium powder (stabilised)	7429-90-5	TWA	5 mg/m <sup>3</sup>	2005-09-01	
aluminium powder (stabilised)	7429-90-5	TWA (Total)	15 mg/m <sup>3</sup>	1989-01-19	
aluminium powder (stabilised)	7429-90-5	TWA (Respirable fraction)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium powder (stabilised)	7429-90-5	TWA (total dust)	15 mg/m <sup>3</sup>	2011-07-01	
aluminium powder (stabilised)	7429-90-5	TWA (respirable fraction)	5 mg/m <sup>3</sup>	2011-07-01	
aluminium powder (stabilised)	7429-90-5	TWA (Total dust)	15 mg/m <sup>3</sup>	1989-01-19	
aluminium powder (stabilised)	7429-90-5	TWA (respirable dust fraction)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium powder (stabilised)	7429-90-5	TWA (welding fumes)	5 mg/m <sup>3</sup>	2013-10-08	
aluminium powder (stabilised)	7429-90-5	TWA (pyro powders)	5 mg/m <sup>3</sup>	2013-10-08	

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aluminium powder (stabilised)	7429-90-5	TWA (Respirable fraction)	1 mg/m <sup>3</sup>	2013-03-01	
aluminium powder (stabilised)	7429-90-5	TWA (Fumes)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium powder (stabilised)	7429-90-5	PEL (Welding fumes)	5 mg/m <sup>3</sup>	2017-10-02	
aluminium powder (stabilised)	7429-90-5	PEL (Pyro powders)	5 mg/m <sup>3</sup>	2017-10-02	
silver	7440-22-4	TWA	0,1 mg/m <sup>3</sup>	2008-01-01	
silver	7440-22-4	TWA (Dust)	0,01 mg/m <sup>3</sup>	2005-09-01	
silver	7440-22-4	TWA	0,01 mg/m <sup>3</sup>	1989-01-19	
silver	7440-22-4	TWA	0,01 mg/m <sup>3</sup>	1989-01-19	
silver	7440-22-4	TWA	0,01 mg/m <sup>3</sup>	2011-07-01	
silver	7440-22-4	TWA (Dust and fume)	0,1 mg/m <sup>3</sup>	2013-03-01	
silver	7440-22-4	TWA (Dust)	0,01 mg/m <sup>3</sup>	2013-10-08	
silver	7440-22-4	PEL	0,01 mg/m <sup>3</sup>	2014-11-26	
silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot	2012-07-01	
silicon dioxide	7631-86-9	TWA (Dust)	80 mg/m <sup>3</sup> / %SiO <sub>2</sub>	2012-07-01	
silicon dioxide	7631-86-9	TWA	6 mg/m <sup>3</sup>	2013-10-08	
silicon dioxide	7631-86-9	PEL	6 mg/m <sup>3</sup>	2014-11-26	

**8.2 Exposure controls**

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**Personal protective equipment**

- Eye protection : Face-shield
- : Safety glasses
- Hand protection
- Material : Leather
- Glove length : Long sleeve gloves
- Remarks : Leather gloves
- The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
- : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1. Anti-static safety shoes.
- : Dust impervious protective suit
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : Use suitable breathing protection if workplace concentration requires.
- Breathing apparatus with filter.
- P1 filter

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**Environmental exposure controls**

- General advice :
- : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform  
respective authorities.
- Water :
- : The product should not be allowed to enter drains, water  
courses or the soil.
- :

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

- Appearance : powder
- Colour : silver
- Odour : odourless
- pH : No data available
- Melting point/range : 660 °C
- Boiling point/boiling range : No data available
- Flash point : No data available
- Bulk density : No data available
- Flammability (solid, gas) : Combustible Solids
- 
- Auto-flammability : No data available
- Upper explosion limit : No data available
- Lower explosion limit : 30 g/m<sup>3</sup>

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Vapour pressure	: No data available
Density	: No data available
Solubility(ies)	
Water solubility	: insoluble
Miscibility with water	: immiscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available

**9.2 Other information**

Self-Accelerating decomposition temperature (SADT)	: No data available
Self-heating substances	: No data available
Heat of combustion	: No data available
Impact sensitivity	: No data available
Surface tension	: No data available
Conductivity	: No data available
Sublimation point	: No data available
Molecular weight	: No data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

No decomposition if stored and applied as directed.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Contact with acids and alkalis may release hydrogen.

Stable under recommended storage conditions.

Dust may form explosive mixture in air.

**10.4 Conditions to avoid**

Conditions to avoid : No data available

**10.5 Incompatible materials**Materials to avoid : Acids  
Bases  
Oxidizing agents  
Water**10.6 Hazardous decomposition products**

Hazardous decomposition products : No data available

Other information : No data available

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

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**Acute toxicity****Components:****silicon dioxide :**

Acute oral toxicity : LD50 Rat: 5 000 mg/kg

Mouse: 15 000 mg/kg

Acute inhalation toxicity : Rat: 0,139 mg/l

Exposure time: 4 h

Acute dermal toxicity : LD50 Rabbit: &gt; 5 000 mg/kg

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Carcinogenicity**

No data available

**Toxicity to reproduction/fertility**

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No data available

**Reprod.Tox./Development/Teratogenicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

**Further information****Product**No data available

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**SECTION 12: Ecological information****12.1 Toxicity****Components:****silver (7440-22-4) :**

M-Factor : 10

**Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : Very toxic to aquatic life.



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Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

**silver (7440-22-4) :**

M-Factor : 10

**Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

**silicon dioxide (7631-86-9) :**

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 7 600 mg/l

Toxicity to algae : (Chlorella pyrenoidosa (aglae)): 440 mg/l  
Exposure time: 72 h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other adverse effects****Product:**

Additional ecological : An environmental hazard cannot be excluded in the event of

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information unprofessional handling or disposal., Very toxic to aquatic life  
with long lasting effects.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product : The product should not be allowed to enter drains, water  
courses or the soil.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.  
In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
In accordance with local and national regulations.

**SECTION 14: Transport information****14.1 UN number****ADR** : 3077**TDG**

Not dangerous goods

**CFR**

Not dangerous goods

**IMDG** : 3077**IATA** : 3077

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**14.2 Proper shipping name**

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.  
(Silver )

**TDG**

Not dangerous goods

**CFR**

Not dangerous goods

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.  
(,Silver )

**IATA** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.  
(Silver)

**14.3 Transport hazard class**

**ADR** : 9

**TDG**

Not dangerous goods

**CFR**

Not dangerous goods

**IMDG** : 9

**IATA** : 9

**14.4 Packing group****ADR**

Packaging group : III

Classification Code : M7

Hazard Identification Number : 90

Labels : 9

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**TDG**

Not dangerous goods

**CFR**

Not dangerous goods

**IMDG**

Packaging group : III  
Labels : 9  
EmS Number : F-A, S-F

**IATA**

Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Packing instruction (LQ) : Y956  
Packaging group : III  
Labels : 9

**14.5 Environmental hazards****ADR** : Environmentally hazardous**IMDG** : Marine pollutant**14.6 Special precautions for user**

For single packagings <=5L / 5 kg, or combination packagings containing inner packagings <= 5L / 5 kg net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No data available

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Prohibition/Restriction**

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

**Prohibition/Restriction**

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

**Prohibition/Restriction**

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

**15.2 Chemical safety assessment**

No data available

**SECTION 16: Other information****Full text of H-Statements**

H303 : May be harmful if swallowed.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.